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Abstract

Purpose: Accessing auditory and written material simultaneously benefits people with aphasia; however, the extent of benefit as well as people's preferences and experiences may vary given different auditory presentation rates. This study's purpose was to determine how three text-to-speech rates affect comprehension when adults with aphasia access newspaper articles through combined modalities. Secondary aims included exploring time spent reviewing written texts after speech output cessation, rate preference, preference consistency, and participant rationales for preferences.
Method: Twenty-five adults with aphasia read and listened to passages presented at slow (113 words per minute (wpm)), medium (154 wpm), and fast rates (200 wpm). Participants answered comprehension questions, selected most and least preferred rates following the first and third experimental sessions and after receiving performance feedback, and explained rate preferences and reading and listening strategies.
Results: Comprehension accuracy did not vary significantly across presentation rates but reviewing time after cessation of auditory content did. Visual data inspection revealed that, in particular, participants with substantial extra reviewing time took longer given fast than medium or slow presentation. Regardless of exposure amount or receipt of performance feedback, participants most preferred the medium rate and least preferred the fast rate; rationales centered on reading and listening synchronization, benefits to comprehension, and the perceived normality of speaking rate.
Conclusion: As a group, people with aphasia most preferred and were most efficient given a text-to-speech rate around 150 wpm when processing dual modality content; individual differences existed, however, and mandate attention to personal preferences and processing strengths

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